

Re: AIR TESTING IS GETTING SET UP

Elizabeth Allen to: Maya Gee

08/19/2011 04:18 PM

Stuart Turner, "ESSENEINFO@aol.com", Gary Hale, Jae P DOUGLAS, Jan
Cc: Wroncy, Karen BISHOP, Richard Kauffman, rkauffman, Scott Downey, Sheila
Fleming, Eron king, Kay Morrison

Maya,

I haven't seen a spray notification for 2011, but the notifications from 2006-2010 are remarkably consistent in listing essentially the same 10 herbicides. From the information you've provided, it appears the samples you're having collected will be analyzed using EPA Method TO-4A, which also has the catchy title of "Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using High Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD)." Here are the herbicides listed in the notifications:

Atrazine
Hexazinone
Imazapyr
Sulfometuron methyl
Metsulfuron methyl
2,4-D
Clopyralid
Glyphosate
Triclopyr
Aminopyralid
Picloram

Only atrazine and 2,4-D are on the analyte list for TO-4A, and I suspect that no one single method can analyze for that entire list, though I'll defer to our chemists. Richard forwarded the information from Air Toxics. They are a very good lab, but the analyte list they provided for TO-4A appears abbreviated. I've attached the table of target analytes from EPA's documentation of the method description. Most of the chemicals you'll see on that list are chlorinated insecticides. So at this point, it appears that of the herbicides, only atrazine and 2,4-D are detectable by Method TO-4A, unless Air Toxics has further developed the method (Air Toxics is a very good lab). And from your description of the spray notifications from Weyerhaeuser, they don't intend to apply atrazine and 2,4-D.

One other thing to consider. I've looked at a few studies designed to characterize vapor concentrations of various pesticides in air at locations not immediately adjacent to ongoing applications. They've been detected, though the detections were typically in the very low (i.e., less than 10) nanograms per cubic meter range. Unless active spraying is occurring or has just taken place, it might be necessary to obtain pretty low detection limits. One of the problems associated with sampling for these herbicides is that they have fairly low vapor pressures. That doesn't mean they don't volatilize, and that certain conditions don't facilitate volatilization better than others, but at typical equilibrium conditions, vapor-phase concentrations are likely fairly low. We're looking at using samplers that contain a XAD resin and can be left out for perhaps a month, in order to be able to measure airborne concentrations that occur during not only during any spray events, as well as what we expect to be lower concentrations in-between sprays.

We would be happy to have a phone call with you next week to discuss some of the sampling issues with you. I don't mean to imply that EPA would necessarily be able to use the data you collect in any official manner, but we certainly are interested in ensuring that any data you decide to collect is as usable for your purposes as it can be.

Elizabeth

[attachment "to-4ar2r 35.pdf" deleted by Scott Downey/R10/USEPA/US]

Date: 08/18/2011 11:45 AM
Subject: Re: AIR TESTING IS GETTING SET UP

Thank you Richard!
We are welcoming all inquiries , tips ,guidance from EPA's team.
We are very open to your involvement to what ever degree you wish.

All of the equipment has arrived and we are getting the schedule set up
with Stu Turner,who is setting the air samplers up for us.
At this point it looks like they will be set up next week.
Please include him in the conversation as well.
Thanks again,
Maya

On Thu, Aug 18, 2011 at 9:50 AM, <Kauffman.Richard@epamail.epa.gov>
wrote:
Hello, Maya,

I raised the topic of your air sampling plan in a meeting with EPA
this
morning, and if you would find it helpful, EPA has offered to have
their
sampling experts take a look at your plan and provide any relevant
advice. I have copied Sheila, Elizabeth, and Scott on this message.

Richard

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